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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/892,289	06/26/2001	Farhad Fuad Islam	10961206-3	2816

7590 04/05/2006

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EXAMINER

YIMAM, HARUN M

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/892,289	Applicant(s) ISLAM ET AL.	
	Examiner Harun M. Yimam	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-6,8-10,12-15 and 17-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-6,8-10,12-15 and 17-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Note to Applicant

Art Units 2611, 2614 and 2617 have changed to 2623. Please make all future correspondence indicate the new designation 2623.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 12/27/2005 have been fully considered but they are moot in view of the new grounds of rejection.
2. In response to applicants' argument (page 11, 4th paragraph) that Shaffer is not relevant to the invention of claims 2, 7 and 12 where resource allocation at the network level is involved, applicants should note that Shaffer explicitly discloses that element 10 in figure 1 is a **network node** for transmitting and receiving video, voice, data and session-control information between network-connected end devices (column 4, lines 50-56). Furthermore, Shaffer discloses that the said network node is for dynamically allocating bandwidth for intranodal and internodal telecommunications sessions, which include monitoring resource utilization even at a system-wide level (see abstract and column 5, lines 26-36).
3. In response to applicants' argument (page 12, 1st paragraph) that Shaffer does not disclose the claimed "software agent", applicants should note that the claimed limitation "using a software agent to assert dynamic control over the operating system to

increase resources allocated to the media manipulation to improve the quality of service provided,” reads on Shaffer’s steps for determining and implementing utilization thresholds for the dynamic bandwidth allocation (see element 46 in figure 1, figure 3, column 4, lines 27-44 and column 7, lines 4-22). Furthermore, Shaffer additionally discloses using a software agent to issue instructions to the additional end device (the utilization-level circuitry—48 in figure 1 continuously tracks and monitors the availability of bandwidth at every level within the network—see figure 1 and column 5, lines 50-59 and column 6, lines 10-14).

4. In response to applicants’ arguments (page 13, 3rd paragraph) that Downs does not disclose the bit rate control operation as claimed, applicants should note that Downs discloses a scenario wherein the quality of the data encoded and transmitted is lower than it need be (column 2, lines 17-18). Furthermore, although Downs disclosure discusses more on the received data being more than the user-specified quality of service, Downs explicitly discloses that various changes in the details, materials, and arrangements of the parts which have been described may be made by those skilled in the art (column 7, lines 53-58).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 2, 3, 5, 6, 8, 10, 12, 13 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Shaffer (US 5,673,253).

Considering claims 2 and 12, Shaffer discloses a method for controlling an end device that includes an operating system that controls media manipulation to provide a quality of service specified by a user, the method comprising:

receiving an input (request - 68 in figure 2) specifying a demand for a quality of service (column 3, line 61-64, column 5, lines 18-22, and column 7, lines 6-10)

monitoring a quality of service provided to determine whether the quality of service provided meets the quality of service demanded (Utilization of resources, which indicate QOS provided, is monitored and channels are allocated to meet the demanded QOS, which is determined by the number of channels involved—column 3, lines 19-26);
and

when the quality of service provided is less than the quality of service demanded (Channels are allocated to meet the demanded QOS, which is determined by the number of channels involved. A request for a particular bandwidth will be initiated at a certain time. If the available resource—QOS provided, is detected as being below a predetermined threshold—QOS demanded, then bandwidth reallocation is triggered—column 3, lines 19-28). Limitation “using a software agent to assert dynamic control over the operating system to increase resources allocated to the media manipulation to improve the quality of service provided,” reads on Shaffer’s steps for determining and implementing utilization thresholds for the dynamic bandwidth allocation—see element 46 in figure 1, figure 3, column 4, lines 27-44 and column 7, lines 4-22).

Shaffer further discloses that the end device is connected to a network (10 in figure 1) to which an additional end device (18 in figure 1) is connected (column 4, lines 50-65);

the quality of service perceived by the user of the end device depends on media signals sent by the additional device (column 7, lines 49-59). Shaffer additionally discloses using a software agent to issue instructions to the additional end device (see figure 1 and column 5, lines 50-59 and column 6, lines 10-14). Shaffer additionally discloses using a further software agent located in the additional end device to perform a bit rate control operation to improve the quality of service at the end device (the step where end devices negotiate and access the necessary number of channels in order to achieve the negotiated bandwidth inherently discloses performing a bit rate control operation—column 3, lines 23-29 and column 5, lines 14-21).

As for claim 6, Shaffer discloses that the software agent causes the operating system to increase resources allocated to the media manipulation by changing a priority level of the media manipulation (column 6, lines 1-15).

With regards to claims 3, 8 and 13, Shaffer discloses performing a bit rate control operation (a bit rate control operation is inherently disclosed as end devices negotiate and access the necessary number of channels in order to achieve the negotiated bandwidth) in response to the data indicating the quality of service demanded (column 5, lines 14-21).

Regarding claims 5, 10, and 15, Shaffer discloses that more than one additional end device (20 or 22 in figure 1) is connected to the network (column 4, lines 50-65); each additional end device transmits a media signal to the end device (column 4, lines 50-65); the quality of service perceived by the user of the end device depends on media signals sent by each additional device (column 7, lines 5-59). Shaffer additionally discloses receiving a priority input assigning a priority to each additional end device and using a software agent to issue instructions to an additional end device having a lowest one of the priorities assigned by the priority input (column 5, line 50 – column 6, line 19).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 4, 17-20 and 24-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shaffer (US 5,673,253) in view of Downs (US 5,689,800).

Regarding claim 4, Shaffer discloses a method of reproducing one or more multimedia streams at a local end device in accordance with a user-specified quality of service.

Shaffer fails to explicitly disclose a quality of service parameter i.e., said parameter being a number of quantizing levels applied to a video signal.

In analogous art, Downs discloses that change in QOS may correspond with a change a parameter of the media signal transmitted by the additional end device; said parameter being a number of quantizing levels applied to a video signal (column 3, lines 40-46 and column 6, lines 56-66).

It would have been obvious to one of ordinary skill in the art to modify Shaffer's system to include quality of service parameters, as taught by Downs, for the benefit of allowing the source system to more efficiently encode and transmit the video data to the destination system (column 3, lines 5-10).

Regarding claim 17, Shaffer discloses a method of reproducing one or more multimedia streams at a local end device in accordance with a user-specified quality of service, comprising: receiving one or more multimedia streams from respective remote end devices (column 3, line 61-64, column 5, lines 18-22, and column 7, lines 6-10); determining whether a quality of service for one or more of the received multimedia streams is less than the user-specified quality of service (Utilization of resources, which indicate QOS provided, is monitored and channels are allocated to meet the demanded QOS, which is determined by the number of channels involved—column 3, lines 15-28 and column 4, lines 5-12).

Shaffer fails to disclose transmitting to a selected remote end device a request for a bit rate control operation to be performed at the selected remote end device.

In analogous art, Downs discloses transmitting to a selected remote end device (encoding system 100) a request for a bit rate control operation to be performed at the selected remote end device (the decoding system 200 selecting new window display parameters: size, resolution, or quality, reads on the request for a bit rate control operation—column 6, lines 44-55 and lines 60-66).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shaffer's system to include transmitting a request for a bit rate control operation, as taught by Downs, for the benefit of modifying the method of encoding the video data before encoding and transmitting the data (column 6, lines 53-55).

Considering claims 18 and 19, Shaffer and Downs meet the claimed limitation. In particular, Downs discloses quality of service parameters (column 3, lines 5-10).

Claim 20 is met by Shaffer and Downs. In particular, Downs discloses that based upon the transmitted bit rate control operation request, the selected remote end device reduces a quality of service for the multimedia stream supplied by the selected remote end device to the local end device (column 3, lines 40-46, column 6, lines 23-29, and column 6, lines 63-66).

Claim 24 is met by Shaffer and Downs. In particular, Shaffer discloses dynamically reallocating resources in favor of multimedia processing after determining that a quality of service for one or more of the received multimedia streams is less than the user-specified quality of service (column 3, lines 14-28).

Shaffer fails to disclose that the dynamic reallocation of resources takes place on the local end device.

In analogous art, Downs discloses reallocation of resources on the local end device (encoding system 100, which is the local end device, modifies its method of encoding the video data right after it receives the new parameters selected by the decoding system 200—column 6, lines 49-55).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shaffer's system to include reallocation of resources on the local end device, as taught by Downs, for the benefit of increasing the quality of service.

Claim 25 is met by Shaffer and Downs. In particular, Downs discloses determining whether the local end device has resources available to allocate dynamically to media manipulation (column 6, line 56 – column 7, line 10).

Claim 26 is met by Shaffer and Downs. In particular, Shaffer discloses that the bit rate control operation request is transmitted to the selected remote end device after determining that no resources are available to dynamically allocate to media manipulation (column 7, lines 15-22). (The step where end devices negotiate and access the necessary number of channels in order to achieve the negotiated bandwidth inherently discloses performing a bit rate control operation—column 3, lines 23-29 and column 5, lines 14-21).

Considering claim 27, Shaffer discloses a method of reproducing one or more multimedia streams at a local end device in accordance with a user-specified quality of service.

Shaffer fails to explicitly disclose a quality of service parameter i.e., said parameter being a media synthesis and compounding state of the video and audio signals.

In analogous art, Downs discloses that the encoded signals are decoded and scaled for display (the media synthesis and compounding state of the video and audio signals must be changed prior to preparing the transmitted signals for display—column 4, lines 6-16).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shaffer's system to include changing the media synthesis and compounding state of the video and audio signals, as taught by Downs, for the benefit of preparing the decoded signal for display.

As for claim 28, it is met by the limitations of claim 10 and 27.

With regards to claim 29, it is met by the limitations of 4, 6, 9, and 12.

Regarding claim 30, it is met by the limitations of claim 28 (i.e., "one of said additional end devices" is equivalent to the multipoint control unit (MCU)).

Considering claim 31, it is met by the limitation of claim 29.

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shaffer (US 5,673,253) in view of Mead (US 5,708,473).

Regarding claim 9, Shaffer discloses a method of reproducing one or more multimedia streams at a local end device in accordance with a user-specified quality of service.

Shaffer fails to explicitly disclose a quality of service parameter i.e., said parameter being a frame rate of the video signal.

In analogous art, Mead discloses that change in QOS may correspond with a change a parameter of the media signal transmitted by the additional end device; said parameter being a frame rate of the video signal (column 3, lines 40-46 and column 6, lines 51-66).

It would have been obvious to one of ordinary skill in the art to modify Shaffer's system to include quality of service parameters, as taught by Mead, for the benefit of

allowing the source system to more efficiently encode and transmit the video data to the destination system (column 3, lines 5-10).

10. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shaffer (US 5,673,253) in view of Mori (US 5,818,846).

Regarding claim 14, Shaffer discloses a method of reproducing one or more multimedia streams at a local end device in accordance with a user-specified quality of service. Shaffer further discloses that it is typical for two endpoint nodes of a multimedia session to negotiate for a desired bandwidth during a call session (column 5, lines 14-21).

However, Shaffer fails to explicitly disclose a quality of service parameter i.e., said parameter being number of quantizing bits of an audio signal.

In analogous art, Mori discloses that change in QOS may correspond with a change a parameter of the media signal transmitted by the additional end device; said parameter being number of quantizing bits of an audio signal (column 4, lines 11-42).

It would have been obvious to one of ordinary skill in the art to modify Shaffer's system to include number of quantizing bits of an audio signal, as taught by Mori, for the benefit of transmitting a multiplexed digital signal.

11. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shaffer (US 5,673,253) in view of Downs (US 5,689,800) and further in view of Billington (US 5,963,884).

Considering claim 21, Shaffer and Downs disclose assign a relative quality priority for each of the received multimedia streams (Shaffer—column 3, line 61-64 and column 5, lines 18-22).

Shaffer and Downs fail to explicitly disclose prompting a user to assign a relative quality priority for each of the received multimedia streams.

In analogous art, Billington discloses prompting a user to assign a relative quality priority, i.e. resolution (column 6, line 52 – column 7, line 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include prompting a user, as taught by Billington, for the benefit of allowing a user to control a particular system (column 6, line 52 – column 7, line 4).

Claim 22 is met by Shaffer, Downs, and Billington. In particular, Downs discloses selecting to receive the bit rate control operation request a remote end device supplying a multimedia stream with a lowest user-assigned relative quality priority (column 6, lines 23-29 and column 7, lines 29-48).

Claim 23 is met by Shaffer, Downs, and Billington. In particular, Shaffer discloses that the requested bit rate control operation is performed at the selected remote end device, determining whether a quality of service for one or more of the received multimedia streams is less than the user-specified quality of service (Utilization of resources, which indicate QOS provided, is monitored and channels are allocated to meet the demanded QOS, which is determined by the number of channels involved—column 3, lines 19-26); and transmitting a bit rate control request to a remote end device supplying a multimedia stream with a next lowest user-assigned relative quality priority after determining that a quality of service for one or more of the received multimedia streams is less than the user-specified quality of service (column 3, lines 15-28 and column 4, lines 5-12).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harun M. Yimam whose telephone number is 571-272-7260. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Grant can be reached on 571-272-7294. The fax phone number for the organization where this application or proceeding is assigned is 571-272-6000.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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